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School Visits and Teacher Survey: Four-year Research Plan

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SCHOOL VISITS AND TEACHER SURVEY: FOUR-YEAR RESEARCH PLAN

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Introduction

Last year, HumRRO began a four-year research effort that was designed around two parts: school visits and teacher surveys (Thacker & Hoffman, 1998). HumRRO recently completed the first phase of this research plan with a school visits study that took place during the 1998-99 school year (Thacker, Koger, Hoffman, & Koger, 1999). This current plan builds upon research that HumRRO conducted previously for the Kentucky Department of Education. The previous research (Hoffman, Harris, Koger, & Thacker, 1997; Harris, Hoffman, Koger, & Thacker, 1998) examined the relationship of gains in seventh- and eighth-grade KIRIS scores and the use of reform instructional practices. The research found a connection between the use of reform practices, such as small group discussions, hands on/laboratory activities, and performance-based assessments, to KIRIS gains. The current plan also addresses the validity issue of consequential impact by examining the impact of CATS, in general, and the Kentucky Core Content Test (KCCT), in particular, on instruction.

Because this research plan was designed to take place over four years, the data collection and analysis allows for considerable continuity. HumRRO will continue to take a "school stories" approach to its school visits studies, given the relatively small number of schools that it is scheduled to visit each year. Each year, HumRRO will continue to capture additional details through teacher interviews, classroom observations, and artifact analysis. This more qualitative approach will be compared to more quantitative findings from student and teacher questionnaires and the scores themselves. The comparison of these qualitative and quantitative findings will serve to inform educators about the effectiveness of various educational policies and programs at the school level. The research will examine practices in the content areas of science and social studies.

Review of FY 1999 Activities

Teacher Survey

In FY 1999, HumRRO assisted KDE with the editing of the 1998 teacher survey. The intent was to establish an instrument that could be used to:

- Detect relationships between instructional practices and KCCT scores.
- Track changes in instructional practices over time.

As established in the draft four-year plan, no analyses of 1999 teacher survey data occurred during FY 1999 due to the data collection and scoring schedule.

School Visits for FY 1999

The draft four-year plan (Thacker & Hoffman, 1998) established a longitudinal study of Kentucky schools that would be qualitative in nature and that would take the form of "school stories" in its approach. The FY 1999 study accomplished the initial portion of that work, as researchers completed visits to 20 schools in 10 districts throughout the state. Research teams were on the road from the week of Feb. 15, 1999 through the week of March 22, 1999. No delays were encountered due to weather; however, a flu outbreak in the state caused several teacher absences and also caused one school in the study to be closed for several days during the week prior to our visit.

The FY 1999 school visits study used interviews, classroom observations, and assessment artifact collection to examine teachers' perceptions about the changes in the testing and accountability system and the effects those perceptions have on their conceptualizations of learning expectations. Note that the focus was on perceptions rather than on more concrete data, because visits took place before the first CATS test had been given.

Interviews

Researchers conducted interviews with science and social studies teachers, principals, and district representatives to examine those perceptions and to establish a baseline for the remaining years of the study. Researchers learned that most teachers professed little knowledge of CATS, although many mentioned the addition of the multiple-choice component to the Kentucky Core Content Test as a change with which they were familiar. Teachers who had previously changed their instructional practices to meet the demands of KIRIS seemed to prefer to take a "wait and see" attitude before changing their practices once again for a test that they had not yet seen. In addition, there was a strong belief that the Kentucky Core Content Tests would be quite similar to the old KIRIS tests.

Observations

Researchers observed science and social studies classes, with priority given to those subjects in assessment grades (fourth- and seventh-grade science, fifth- and eighth-grade social studies). In those elementary schools with self-contained classrooms, it was not always possible to observe specific classes and researchers sometimes observed a language arts or mathematics session. Researchers concentrated on capturing different instructional practices used during the observation, noting the different techniques and activities used. The analysis revealed that, in most classes, at least some reform practices were being implemented during a portion of the class period. Open-response questions appeared to have become more routine in the class setting compared to what the same researchers observed in 1997 (Hoffman et al., 1997). Less instructional emphasis on writing aids such as the four-column method and more emphasis on the content of the questions was noted, as well. However, researchers also found that for several observed teachers, an apparent lack of content knowledge had a negative impact on instructional quality.

Artifact Collection

Researchers were able to collect artifacts from most of the interviewed teachers, who had been

asked to provide three assessment documents: the lowest unit of assessment they used, such as a homework assignment or quiz; a middle unit assessment, such as a chapter test; and the highest unit of assessment they used, such as a unit or semester test. The actual assessment documents provided by participants were not consistent enough for meaningful analysis during this first year. Efforts will be made to analyze this data as more assessment documents are collected and as teachers become more familiar with the document requirements. Once a sufficient volume of quality assessment documents are collected, researchers will examine artifacts to determine breadth of coverage (assessing many topics versus assessing a few topics) and the type of process used to demonstrate knowledge (recall versus use of higher order thinking skills).

Proposed Activities for FY 2000, 2001, and 2002

For the remaining three years of the plan, HumRRO will continue to conduct school visits and will report on those visits to KDE. HumRRO will coordinate with KDE on the preparation of the teacher survey and share analysis and reporting of survey results with KDE. As already determined, the school visits portion of the research will address the validity issue of consequential impact by examining the impact of CATS, in general, and the Kentucky Core Content Test (KCCT), in particular, on instruction. Analysis of the teacher questionnaire will address relationships between teachers' descriptions of their instruction and CATS results.

This plan is a compromise between qualitative and quantitative research. The teacher survey data should be sufficiently reliable to satisfy generalizability concerns, while the visits give depth to the study and frame the findings of the survey research in terms of what occurs in the everyday practice of teaching.

FY 2000

Teacher Survey

Teacher survey data from 1999 will become available for analysis at approximately the same time that school accountability results are available[1]. We propose working with KDE to build composite scales from the survey items. Scale scores will be calculated for each teacher and teachers' scale scores will be aggregated to the school level. HumRRO researchers will cooperate with KDE in performing analysis of the teacher questionnaire. Specifically, HumRRO will analyze relationships between teachers' responses and school Kentucky Core Content Test scores for science and social studies from middle and elementary schools. A special analysis will be conducted with teacher questionnaire data from the 20 schools HumRRO visited in spring 1999. This special analysis, largely qualitative, will reflect on the correspondence between teachers' questionnaire responses and their interview data.

School Visits

[1] HumRRO, along with Dr. John Poggio and the University of Kansas, has applied for a US Department of Education, Field-Initiated Studies grant to increase the resources that can be applied to analyzing teacher questionnaire data.

During the 1999-2000 academic year, HumRRO will visit 15 districts (one elementary and one middle school per district). These districts will represent a wide range of academic performance and geographic regions. Because of the small sample and the large number of potentially important control variables (e.g., regional SES), no attempt will be made to select schools as statistically representative of any other variable.

Generally, two teams consisting of two researchers per team will be available to conduct school visits each week. Visits will include interviews with teachers, principals, and district representatives; classroom observations; and the collection of assessment artifacts. The 1999-2000 school visits research will concentrate on the school use of CATS reports for making school improvement plans. The research also will examine teacher perceptions discussed in the 1999 school visits study and the potential for those perceptions to have changed, given experience with CATS.

Research Priorities Framing Visits Study

Many of these research priorities are taken from the FY 1999 school visits study. They bear re-examination because teachers and administrators now have had experience with one round of CATS testing and scoring and will be better able to address these issues.

- How do CATS score reports influence school improvement plans?
- Is CATS an improvement over the old system?
- Do teacher perceptions about CATS influence their instructional practices?
- What practices are emphasized now that were either not emphasized or de-emphasized under the old system?
- Has CATS improved teacher perceptions about the fairness of the accountability system?
- How do elementary teachers perceive these issues, compared to middle school teachers?
- Will CATS result in students who are better educated?

Interviews

Because the 1998-99 school visits study was developed as the first of a four-part research effort, the 1999-2000 school visits study logically must continue examining many of the themes originally established in the earlier study. At the time of the initial study, for example, many educators were taking a "wait and see" stance about the effects of CATS on instructional practices (Thacker et al., 1999). Now that teachers and administrators have experience with CATS, it will be useful to revisit those initial perceptions to determine the impact that CATS may be having.

Teacher Interviews

During teacher interviews, we propose to address the following topics and issues:

- What kinds of changes in instructional practice have occurred because of the CATS system?

- Is CATS more/less effective than KIRIS (distinguish between CATS overall system and Kentucky Core Content Tests)?
- How do changes in the accountability system affect teachers and school?
- Does CATS measure "basics"?
- Is CATS more indicative of content knowledge?
- Confidence that the CATS system and individual parts—NRT, Kentucky Core Content Tests, writing portfolio, on-demand writing prompt—are measuring what students know and are able to do.
- Did students put forth more effort on CATS compared to what they did on KIRIS?
- Did the Kentucky Core Content Tests take less time to administer than KIRIS tests?
- How have teachers used CATS score reports to guide instruction?
- What influence has the change in portfolio requirements had on classroom instruction?
- Have portfolios improved as a result of having to complete fewer entries?

Principal Interviews

Principal interviews will focus primarily on the use and influence of CATS score reports on school improvement plans:

- What were the school's weak/strong areas?
- Has the score report impacted any school improvement plans the school is undertaking? Is that any different than what happened under KIRIS?
- What are the "big issues" in the school improvement plan? How are you addressing areas that need improvement?
- How do you define an area that needs improving at your school?
- Describe the process by which school improvements are implemented at this school.
- Are there any new programs being implemented for the first time this year in response to the CATS score report? Are there any programs being eliminated?
- Are there any continuing programs implemented during previous years under KIRIS?
- Have you noticed any changes in instructional practices this year as the result of CATS scores?

District Interviews

- What role does the district play in the development of school improvement plans?
- Has the district offered any CATS-specific professional development this year?
- Has the district implemented any training on interpreting the new score reports?
- Has the district implemented any other district-wide programs as the result of score reports?

Observations

Researchers will continue to observe science and social studies classes, with priority going to assessment grades (fourth- and seventh-grade science and fifth- and eighth-grade social studies).

Researchers will attempt to link observations from year to year by tracking individual teachers where possible. As in the previous study, observations will focus on instructional practices.

Artifact Collection

We propose to continue collecting assessment data from teachers; however, analysis of this data will be most effective if done at the end of the four-year study. Additional funding will be sought to support this analysis.

Artifact collection has proved to be somewhat problematic, in that some teachers apparently took our request for assessments less seriously than did others. Because participation in the study is voluntary, we are unable to require that teachers take part in a more detailed collection effort.

Project Schedule

For the first time, school visits are scheduled to take place in the fall, rather than in late winter, when our previous studies took place. This change will allow researchers to conduct the study while CATS score reports are still being used to set policy and implement improvement programs. In addition, reactions to the new methods of calculating scores and determining accountability categories will be fresh in the minds of teachers and relevant to the decisions they are making.

August 1999
- Plan studies

September 1999
- Revise studies based on feedback from KDE.
- Begin creating data collection instruments.
- Review CATS test scores to ensure representation of a wide range of scores.

October 1999
- Recruit schools for study.
- Create visits schedule.
- Construct instruments.
- Field test and edit instruments.

November 1999
- Begin visits in early November.

December 1999
- Continue and complete visits before winter holidays begin.
- Begin compiling data for analysis.

January 2000
- Complete visits, if necessary.
- Complete data analysis.
- Begin writing report.

February 2000
- Complete report draft.

- Submit for revisions.

March 2000

- Edit report.
- Submit for publication.

Tentative Schedule for Visits

Each district will be given the attention of two researchers for two days. We anticipate that a research team will be able to complete two district visits per week, in most cases. Each week will be divided as follows:

Monday	Visit elementary school and district office.
Tuesday	Visit middle school. Travel to next district.
Wednesday	Visit elementary school and district office.
Thursday	Visit middle school. Return home.
Friday	Collate and separate data into analyzable parts. Begin writing school narratives.

In order to visit 15 districts, five weeks will be required barring scheduling and other unforeseen problems. Realistically, visits may be extended by two or three weeks due to weather or scheduling problems. It is hoped that visits will be completed before schools break for the winter holidays.

Agenda for School Visits

Middle Schools

- Interview all available science and social studies teachers, preferably during their prep period. This is estimated to be about eight separate interviews lasting about 30 minutes each.
- Interview principal; estimated to take about 30 minutes
- Observe as available and as time permits

Districts

- District representative interview, lasting about one hour

Elementary Schools

- Interview principal, about 30 minutes
- Interview fourth-, fifth-, and (where applicable) sixth-grade teachers. Emphasis will continue to be on science and social studies practices. Because several elementary schools still operate on a self-contained basis, they may not have prep periods to use for interviews. Thus, it is more difficult to estimate a time for elementary teacher interviews.
- Because one researcher will spend part of this day at the district office, it is unlikely that many observations can take place.

FY 2000 Project Resources

Table 1 School visits and survey research resources (days) for FY 2000

	Planning	Back-ground meetings	Develop materials and recruit schools	Conduct visits and make initial write-ups	Compile write-ups and synthe-size findings	Edit FY 2000 teacher survey	Analyze portions of 1999 teacher survey
Hoffman			2	28	3		15
Thacker			5	32	15	2	15
L. Koger			5	32	10		
M. Koger			5	28	3		5
Total Days	NA	NA	17	120	31	2	35

FY 2001

Teacher Survey

Similar to FY 2000, HumRRO will assist KDE's analysis of the teacher questionnaire data. Specifically, HumRRO will analyze relationships between teachers' responses and school KCCT scores for science and social studies from middle and elementary schools. A special analysis will be conducted with teacher questionnaire data from the 30 schools involved in the visits portion of this research. Again, a small amount of time has also been allocated to making minor changes to the teacher questionnaire for administration in spring 2001.

School Visits for FY 2001

During the 2000-01 school year, HumRRO will re-visit the previous 30 schools. Visits will again consist of teacher interviews, classroom observations, and collection of artifacts, and will last about two and one-half days per district. These visits will concentrate on each school's formative evaluation of the school-improvement strategies studied during the previous year. Issues such as difficulty of implementation, cost, staff interpretation of strategies, expectations for improvement in terms of quantity and area assessed, pervasiveness of strategies, requirements for strategy duration, and others will be addressed. Visits for FY 2001 will occur in February and March.

Project Schedule

November 2000

- Plan studies.

December 2000

- Create schedule, working with schools to ensure minimal disruption.
- Create data collection instruments.

January 2001

- Send schools pre-visit material designed to facilitate data collection. (School improvement strategies from the previous year's visits will be used for this purpose.)

February 2001

- Field test instruments if possible. (School plans may be too divergent for instruments to be used universally.)
- Begin visits and data analysis.

March 2001

- Continue visits and data analysis.

April 2001

- Complete visits and data analysis.
- Begin writing report.

May 2001

- Complete report draft.
- Submit for revisions.

June 2001

- Edit report.
- Submit for publication.

This set of visit studies links directly to the data collected during the first two years of research at these schools. From those studies, both a "baseline picture" and a "strategy for improvement" should be created for each school/district included. Research during the third year will concentrate on the actual changes observed and the implementation and success of the improvement plans.

This third year of school visit studies represents an opportunity to evaluate school improvement strategies in a way that is unprecedented in Kentucky. The longitudinal nature of these visits, returning to the same schools for four consecutive years, will allow researchers to effectively gauge changes regarding teaching methodology, curriculum, classroom assessment strategies, and other as yet unforeseen aspects of the public schools. These initial impressions can then be compared to subsequent visits and used to describe the pervasiveness and duration of implementation of the various programs and strategies schools choose to implement in order to bolster their scores on the state assessment.

The data collection will shift back to the spring, similar to the timing of the first set of visits. This should allow schools ample time to implement any strategies they might devise. It will also, very likely, place data collection beyond the initial surge of interest in improvement generated when schools receive the score reports. The changes in schooling that we observe will necessarily have withstood at least a first round of teacher scrutiny. Any ideas that were posited, but not widely and/or effectively implemented will have become obvious by the time researchers arrive at the school. Teachers will have had time to reflect on the value of attempted changes in practice or curriculum. Also, any changes in classroom assessment strategy should be evident in the artifact collection by this point.

Any evaluation resulting from this study will necessarily be formative in nature. In a system that promotes continuous improvement, truly summative assessments are neither warranted nor possible.

Any change made by a school should evolve as that school receives more detailed information about its own strengths and weaknesses. Improvement plans are likely to be altered regularly as new information is gathered.

It is also not likely that this research will result in a laundry list of improvement strategies that are effective versus those that are ineffective. That is not the goal of this portion of the study. These visits will culminate in a report that details successes and setbacks from a wide variety of schools. We do not anticipate that every effective strategy will be equally effective across all schools. It is possible that teachers may regard some of the efforts by the school as very effective that do not necessarily translate directly into increased state assessment scores. The reverse is also possible.

Instead this research will result in a report that ties school characteristics with improvement efforts and implementation plans. The value of this type of research is that similar schools may be able to avoid pitfalls with regard to implementation, choose plans that seem to be effective for their particular students, and tailor their own strategies around a working knowledge about some of what has already been tested. It will also serve as a communication tool, allowing schools to examine plans constructed by other teachers from across the state and to reference their own experiences to those of schools with both similar and different objectives.

Tentative Schedule for Visits

Each district will be given the attention of two researchers for four days. Each week will be divided as follows.

Monday	Visit elementary school and district office
Tuesday	Visit middle school
Wednesday	Collate and separate data into analyzable parts. Begin writing school narratives
Thursday	Complete description of district based on visits
Friday	NA

FY 2001 Project Resources

Table 2 School visits and survey research resources (days) for FY 2001

	Planning	Background meetings	Develop materials and recruit schools	Conduct visits and make initial write-ups	Compile write-ups and synthesize findings	Make minor Edit to FY 2001 teacher survey	Analyze portions of 2000 teacher survey
Hoffman			2	28	3		15
Thacker			5	32	15	2	15
L. Koger			5	32	10		
M. Koger			2	28	3		1
Total Days	NA	NA	14	120	31	2	31

FY 2002

Teacher Survey

Similar to FY 2000 and 2001, HumRRO will assist KDE's analysis of the teacher questionnaire data. Specifically, HumRRO will analyze relationships between teachers' responses and school KCCT scores for science and social studies from middle and elementary schools. A special analysis will be conducted with teacher questionnaire data from the 30 schools involved in the visits portion of this research.

School Visits for FY 2002

During the 2001-02 academic year, HumRRO will re-visit the previous 30 schools. Visits will again consist of teacher interviews, classroom observations, and collection of artifacts and last about two and a half days per district. These visits will concentrate on the continued formative evaluation of the school-improvement strategies studied during the previous year and, to the extent possible, linking those strategies to state assessment scores. In particular, this study will attempt to evaluate whether the areas where each school concentrated its efforts improved appropriately. This study has more summative aspects than the previous year, but it should still be stressed that any evaluation occurring within this system is necessarily formative because of the on-going nature of the system. The schedule for this year's portion of the study looks much the same as the previous year.

Project Schedule

November 2001
- Plan studies.

December 2001
- Create schedule, working with schools to insure minimal disruption.
- Create data collection instruments.

January 2002
- Send schools pre-visit material designed to facilitate data collection.

February 2002
- Field test instruments if possible.
- Begin visits and data analysis.

March 2002
- Continue visits and data analysis.

April 2002
- Complete visits and data analysis.
- Begin writing report.

May 2002
- Complete report draft.
- Submit for revisions.

June 2002
- Edit report.
- Submit for publication.

This research represents the culmination of four years of research in Kentucky's public school system. Previous studies will have told us how teachers and schools have dealt with the changes to the assessment and accountability system. They will have allowed us to describe the various efforts each school made to improve the educational opportunities and the educational achievement of its own students. They will have allowed us the opportunity to recount the effectiveness of those improvement strategies from the perspective of the teaching practitioners. Now we can ask the larger question. Did the things that the studied schools did, in terms of teaching, assessing, designing curriculum, providing incentives to both students and teachers, or any other improvement strategies they might have implemented, result in improvements in the measured abilities of their students?

We anticipate that schools will exhibit varying degrees of success in terms of implementing and sustaining their improvement strategies. We anticipate varying levels of difficulty regarding the strategies. We hope to find that successful implementation of improvement plans result in positive gains on the state assessment. This research may be sufficient to establish some patterns regarding the different improvement plans and their likely success. For instance, we may be able to describe improvement designs in relation to their difficulty of implementation and their eventual payoff in terms of improving scores. For example:

Table 3 Improvement designs by difficulty of implementation and CATS score gains

	Low Gains	High Gains
High Implementation Difficulty	• Examples to be inserted	• Examples to be inserted
Low Implementation Difficulty	• Examples to be inserted	• Examples to be inserted

By being able to place improvement strategies on a chart similar to this simple two-dimensional representation, schools would be able to implement improvement designs based on data rather than speculation. They would be able to solve the short-term problems in their school while working on long term goals that are likely to be effective.

Tentative Schedule for Visits

Each district will require the attention of two researchers for one week. Each week will be divided as follows.

Monday Visit Middle School (both researchers)
Tuesday Visit Middle School (1 researcher)

	Visit District Office (1 researcher)
Wednesday	Visit Elementary School (both researchers)
Thursday	Collate and separate data into analyzable parts. Begin writing school narratives
Friday am	Complete description of district based on visits

FY 2002 Project Resources

Table 4 School visits and survey research resources (days) for FY 2002

	Planning	Background meetings	Develop materials and recruit schools	Conduct visits and make initial write-ups	Compile write-ups and synthesize findings	Edit teacher survey for 2002	Analyze portions of 2001 teacher survey
Hoffman			2	31.5	3		10
Thacker			5	36	15		10
L. Koger			5	36	10		
M. Koger			4	31.5	4		
Total Days	NA	NA	16	135	32	NA	30

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